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SUBSTANCE

OF AN

INTRODUCTORY LECTURE

TO A COURSE UPON THE STRUCTURE, FUNCTIONS, AND DISEASES OF THE EYE ; COMPRISING A COMPARISON OF THE STATE OF OPHTHALMIC SCIENCE IN GERMANY AND ENGLAND ; AND A RECOMMENDATION TO INTRODUCE THE GERMAN METHOD OF INSTRUCTION INTO THE BRITISH SCHOOLS.

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THE value of Ophthalmic science is so great, that the importance of every thing directly bearing on it will at once be conceded. Accordingly, we might have availed ourselves of the present opportunity to introduce a sketch of its past history, which might have proved alike interesting and profitable. This, however, we at present forego, and we do so, from the desire to direct attention to what we consider a more important subject. As the great and ultimate end of all history, whether medical or general, should be to shed light upon our present path, and to afford guidance and instruction in our future course, we shall select one or two branches only of the history of ophthalmic science, and this not solely because they are important in themselves, but chiefly because they are fertile of suggestions which, if properly improved, could not fail, we conceive, greatly to advance the interests of the science in this country. Hence, we shall avoid all consideration of the condition of ophthalmology in remote antiquity, whether as alluded to by Herodotus, or as practised by the oculists of the

Roman emperors: in like manner, we shall pass by such traces as may be found regarding it in the dark ages, and even in more recent times, when the art was so much in the hands of itinerants and quacks. We shall come down to modern times, and even here shall confine ourselves to two localities in which the science has more or less prospered, namely, to Germany, and our own land. We shall glance at its recent history, and shall touch upon its present state in these countries; considering the steps by which it has attained to the high pre-eminence it holds in the former, and whether there be any sufficient reason why it should be less cherished and less flourishing in the latter. Closely allied to these topics is the all-important subject of education, which may best be regarded in a twofold light, in reference to those who teach, and to those who learn. This most closely affects the pupil and the master, the public seminary and the public well-being; and hence we shall make no apology for soliciting attention, on the present occasion, to the best modes of teaching and learning that science upon which we are about to dwell, and for recommending the adoption and application of the German method of instruction to the British schools.

We turn then, first, to Germany, more especially to Austria, and to its capital, Vienna, which has long been, as it now is, celebrated for its great pre-eminence as an ophthalmic school. The origin of this celebrity is somewhat variously accounted for, but the leading facts connected with it are these.

It is now nearly a hundred years ago, or in the year 1745, that the celebrated Gerard Baron van Swieten, under the auspices of the Empress Maria Theresa, re-arranged and new-modelled the Medical department of the Viennese University.* This distinguished physician had himself been the pupil of the great Boerhaave of Leyden, who, as is well known, was the master of many of those eminent men who, about the same period, laid the foundation of that celebrity which Edinburgh has now for a long time enjoyed as a medical school. The widely-spread fame of the commentator of Boerhaave, together with the great encouragement at that time afforded to men of science and literature to settle in the Austrian capital, soon attracted thither some of the most distinguished characters in Europe. One of these was Nicholas Joseph Pallucci, an Italian physician, celebrated as an oculist and lithotomist. In the year 1750, he was brought by Van Swieten from Florence, and introduced into the University of Vienna, and may be fairly said, as stated by a recent medical traveller, "to have

* In this sketch, we have freely availed ourselves of the able papers on the subject which appeared in the early Numbers of the *Quarterly Journal of Foreign Medicine and Surgery*, and which we had occasion to know were from the classical pen of our friend, Dr Mackenzie of Glasgow; and also, of Mr Wilde's interesting communication in the *Dublin Journal of Medical Science* for November 1841.

laid the foundation of the ophthalmic school there ; for, although he was not a public teacher, yet the works he published on affections of the eye, and his expertness as an operator, generated a taste for that department of medical science that has gone on increasing to the present day." Pallueci died in 1797. His first work, *On a new Method of depressing Cataract*, was published in Paris in the year 1750, and probably procured for him that reputation which recommended him to Van Swieten. He wrote other books both upon the diseases of the eye, and on different surgical subjects. But, notwithstanding these labours of Pallueci, it is true, that, in the Austrian capital itself, Joseph Barth is usually considered as the founder of the ophthalmic school, he having been the first public teacher of the science in the Austrian dominions.

Professor Barth was born at Malta in 1745, and studied medicine first at Rome, and afterwards at Vienna. At the age of eighteen, he was appointed Professor of Anatomy to the University, under Störk, the successor of Van Swieten, and at a later period gave lectures upon ophthalmology. He is not much known by his writings on the subject, and, indeed, published but little. He had, however, many pupils who highly esteemed him for his talents and acquirements. The following tradition is still current at Vienna. A lady, attached to the court of the Empress, becoming blind, was pronounced amaurotic by her ordinary medical advisers ; her malady continuing to increase, Baron Wenzel was sent for from Italy, and at once declared the disease to be cataract, and removed it by a successful operation. So amazed was Maria Theresa at this sad display of Austrian surgery, that she forthwith established a special lectureship of ophthalmology, and Barth, in the year 1773, was called to fill that chair. In 1776, he was appointed oculist to the Emperor Joseph II. He long enjoyed this honourable distinction, and died in 1818.

Among the numerous pupils of this first professor we shall here mention four who were pre-eminent, Santerelli, Prochaska, Beer, and Schmidt. To Santerelli, the first of these, is undoubtedly due the original performance of the extraction of cataract by the superior section of the cornea ; a method which is now perhaps the most esteemed both in Vienna and London. George Prochaska held the chairs of physiology and of systematic ophthalmology in the University of Vienna ; and his character, both as a teacher and an oculist, long stood high. While Prochaska taught systematic ophthalmology in the university, his not less distinguished associate, Professor George Joseph Beer, taught practical ophthalmology in the Great Hospital at Vienna, and there attained the highest celebrity. He was first the assistant, and afterwards the successor of Barth, and practised his favourite art with enthusiasm for upwards of thirty years. He commenced as a private teacher about

the year 1798, and from that time till 1815, was allowed, with the unanimous consent of the profession, to be the most esteemed writer of his day, while he was not less distinguished as an operator and an instructor. Lastly, the fame of Vienna, as a school for the diseases of the eye, was greatly increased by Johann Adam Schmidt. He did not belong to the general hospital, nor to the University, but to the Josephine Academy, the school and hospital for the professional men preparing for the Austrian army. He is known most favourably by his ophthalmic writings, as well as by those on other subjects. These men have now all passed away from this fleeting state, and their places have been supplied by others whose fame in no degree falls short of that of their illustrious predecessors. Dr Frederick Jäger was long the favourite pupil of Beer,—he became his assistant, and son-in-law, inheriting his library, preparations, and instruments. He succeeded Schmidt at the Josephine Academy, where his teaching is, at present, one of the greatest professional attractions to the Austrian capital, and his operations are very generally esteemed as the most splendid exhibitions of eye-surgery in Europe. Dr Rigler is now his assistant. He also is engaged in teaching, and is regarded as a man of high scientific attainments, and great manual dexterity. Dr Anthony Edler von Rosas succeeded, upon the death of Beer, to the practical chair in the University, and thus became the clinical instructor in the great public hospital. He disputes the post of celebrity and distinction with Jäger; his writings are voluminous and esteemed; his operations are universally allowed to be in a high degree dexterous, and his knowledge of the history of the science is most extensive and complete. Dr Gulz, an accomplished operator and able writer, was Von Rosas's assistant at the time of our late visit to the school.

Having thus supplied the names of some of the individuals who have most contributed to establish the Viennese school of ophthalmic science, and to support it at the enviable height it now maintains, it is gratifying to add that the Austrian government has not been behind hand in exciting these able men to their labours, and in yielding them all possible encouragement and support; while, at the same time, it has made and enforced regulations which have secured the greatest skill in this department for the benefit of its subjects, and, in truth, have indirectly made Vienna the great cradle of ophthalmic accomplishment and skill.

Imperial patronage, as may be gathered from the preceding details, has been conferred in the Austrian capital upon no fewer than three professorships of ophthalmic science, now, we believe, comprised in two, and in both of these, assistants also are provided, who reside constantly in the splendid hospitals, civil and military, which government also supports. The attendance upon

these courses, on the part of students who seek for the degrees of Doctor in Medicine and Surgery, is made imperative. In the third year of a student's curriculum he must attend the lectures of the professor of systematic ophthalmology in the University; and no practitioner, though possessed of a degree in medicine, can practise publicly as an oculist, in any part of the Austrian dominions, without having undergone a special examination on the diseases of the eye, and having obtained a diploma for this particular branch. "In all the public courses of medicine and surgery, an examination of the enrolled students is held by several professors every half-year, in the presence of one or more of the other office-bearers of the University; and in order to be admitted to an examination for a degree, the candidate must produce certificates of having acquitted himself respectably in three Semestral (six months) examinations; of having completed his fifth year of study; and of having publicly treated within the last half-year, two patients in the clinic for internal diseases, the cases of which patients he must at the same time present to the Faculty, written in Latin." Those students, again, who aspire to the degree of doctor in surgery, or of ophthalmology, must, moreover, have attended the course of practical ophthalmology, as conducted in the great hospitals, the civilians in the civil hospital, the military in the Nosocomium Josephinum.

Our purpose in this survey, as already hinted, is to institute a comparison between the system now under review, and that pursued in this country, and to examine into their respective workings, and the grand result of each; and even from what has been already stated, we might perceive a great contrast in the teaching arrangements, to the manifest disadvantage of our native land. But the grand peculiarity of the German method has not yet been touched upon; and hence we proceed to allude to that clinical method of instruction to which, in truth, Vienna owes nearly all its celebrity. We premise that it differs *toto cælo* from that clinical instruction which exists among ourselves; and, as from personal observation we entertain a very decided conviction that this method of teaching, well conducted, is, of all others, the most important means of supplying a good education, not in ophthalmic science only, but in all the other practical branches of the healing art, we trust that no apology is necessary for somewhat fully insisting upon it.

Dr Beddoes, in a letter to Sir Joseph Banks, informs us, that the practice of giving regular lectures on the cases of patients under actual treatment, which, we need not say, is the grand characteristic of clinical medicine, was first established at the hospital of St Francis, at Padua, in the year 1578; and our distinguished fellow-citizen, Dr J. Thomson, who has so ably illustrated this as well as many other departments of our science, well remarks, "that the necessity which exists that students of medi-

cine, before leaving the academic benches, to take charge of the health and lives of their fellow-men, should have opportunities of witnessing the practice of physicians of experience and skill, must have become apparent almost as soon as regular schools of medicine were instituted." He adds, " that before the middle of the seventeenth century, the practice of delivering clinical lectures had been introduced into the medical schools of Holland, both at Utrecht and Leyden, at which latter school it was, that at the beginning of the eighteenth century, the practice was so successfully pursued by the illustrious Boerhaave, by whose pupils it was conveyed to other medical schools, and particularly to those of Edinburgh and Vienna." This statement brings us to the point in view, and directs our regards to the great school of this city, (Edinburgh), as well as to that other celebrated university to whose history we again revert.

We regret that we have neither the information, nor the necessary documents which might enable us to supply so minute an account as we could wish of the early clinical school of Vienna. We may state, however, that the medical clinic was united with the general hospital in the year 1784, under the direction of Maximilian Stoll ; and we have seen that Professor Barth was appointed to the ophthalmic chair in the year 1773, in which he was succeeded in 1798 by Beer. How far Beer followed the exact method of Barth, we know not ; and we cannot expressly say what was the plan of his own earlier instructions, presumable though it be, that one general method, more or less, pervaded the whole. Be this, however, as it may, Beer has himself informed us, that, after fourteen years of private instruction in his art, he laid the design of forming a special ophthalmic clinic before the Emperor. This design was approved of, and a portion of the Imperial Hospital was set apart for treating and teaching eye diseases ; and he commenced his duties in this new office in April 1812. Being then but Extraordinary Professor, the students of the university were not compelled to attend his prelections ; but men from every part of Europe soon flocked around him to profit by his instruction, and take advantage of the many opportunities which his situation afforded. In the year 1815, the extraordinary was converted into an ordinary professorship of practical Ophthalmology, and attendance then became a compulsory part of medical education.

Without, however, longer insisting upon the history of the introduction of Clinical instruction into the Vienna school, we proceed to describe it as we have ourselves witnessed it, and as it has been depicted by others ; premising that, although the Ophthalmic clinic has its full share of pre-eminence, yet it is not confined to this department ; on the contrary, the method is maintained by not fewer than five distinct and salaried professors,—two of these being occupied with what in this country has usually been denominated

the Practice of Physic, divided into the consideration of acute diseases and chronic, a third with Surgery, a fourth with Obstetrical Science, and the remaining one with the subject now claiming our particular regard.

Clinical instruction in Germany is given under various distinct forms, of which the *Internal clinic*, and what has been designated the *External* are the most considerable. Not having ourselves witnessed the former of these, which ceases during the vacation, we shall supply a short abridgement of the account given by the graphic pen of Dr Mackenzie, who himself has so much improved the advantages it presents. The visit in the medical clinic occupied one hour every morning. The assistant, who is a graduate, and is styled the *Secundarius*, regularly follows the visit, and, along with those students who choose to attend, visits again in the evening. The duties of the *candidati assistentes*, or students who have the care of the patients, consist in examining the particular patient committed to their care publicly on his admission, and again at every visit; in writing out a *historia morbi*, and in keeping a careful journal of the symptoms and treatment. These cases are not written in a short and imperfect manner; but contain a faithful and minute account of the state of the patients at the last morning visit, at noon, and at evening, with observations in regard to the diagnosis, prognosis, and treatment. The reports are written in Latin, are publicly read at the bed-side, and on the dismissal of the patient are delivered to the professor.

The hospital accommodation for the Ophthalmic clinic consists of what is called the *auditorium*, a kind of reception hall into which the new patients are received, and where the professor and students assemble, and of two wards each containing twelve beds. The auditorium is well lighted, and coloured green. The windows are so supplied with shutters and curtains that the light can be in an instant increased or diminished. It affords accommodation during lectures for 150 students, and has a portion of an oval form slightly raised, called the *cathedra*, whence the lectures are delivered, and where the operations are performed, being large enough to contain a patient, along with the professor, the assistant, and the pupil, to whose care the patient is entrusted. Each of the wards, one for males, and another for females, is about the size of the auditorium, is also coloured green, and contains twelve beds. Frank, at Pavia, had rarely above eighteen patients in his medical clinic; and it is important to note that this limited number is essential to the success of the system.

The instruction in the ophthalmic, as in the other clinics, is continued uninterruptedly for ten months. The lectures on practical ophthalmology are delivered every morning, Saturdays and Sundays excepted, from ten to eleven o'clock, comprising first the

anatomy and physiology of the eye ; then a few lectures on the manner in which the eye should be examined ; next on the pathology of the organ, and the medical and surgical treatment of its diseases, the whole concluding with the history of Ophthalmology. Daily, again, from eleven o'clock to twelve, Saturdays and Sundays included, the strictly practical instructions are given, partly at the bed-sides of the patients, and partly in the review of the out-patients who apply for relief. Every new and interesting patient, whether he is to remain or immediately to depart, is brought into the auditorium, and placed in the cathedra. One of the students now presents himself as the assistant or ordinarius for the patient, and undertakes the examination of the case under the correction of the professor.

This last statement brings into view what is called the *External clinic*, and which consists of nothing more than the adaptation of the clinical method of instruction to the treatment of the out-door patients of an hospital,—the number, at the same time, being kept small. With the existence of an hospital, however, it has no necessary connection, as it may often be witnessed in operation, when the internal clinic, as during vacation, is closed. In these latter circumstances, again, it corresponds in many particulars with our dispensaries, and might most readily and advantageously, with a little management, be carried on in some of these institutions. In the north of Germany this system is usually designated by the name of *Polyclinic*, as the number of out-patients who present themselves usually much exceeds the number of in-patients ; whilst another name it receives is that of *Ambulatorium*, from the applicants making it their business to come at regular hours, and retiring again as soon as their prescriptions are prepared, and their medicines delivered. Professor Chelius informed us, that at Heidelberg a list of the students who engaged in this duty was kept, and that they took the cases which presented themselves, very much in rotation, the privilege being restricted to those who were considered equal to the responsibility. With a new patient, the *Ordinarius* next in turn presents himself before the professor and his fellow-students. He immediately commences his examination ; the professor, at the same time, by such inquiries as he deems necessary, satisfying himself of the nature of the case ; the bystanders also examining for themselves, and narrowly observing all that passes. This done, the professor demands of the ordinarius the nature of the complaint before them ; and, if a wrong answer is given, tries, by some leading question or hint, to make the pupil correct himself. The disease at length ascertained, interrogatories are put respecting the diagnosis, prognosis, and *methodus medendi*, and the treatment to be adopted being agreed upon, the assistant withdraws the patient from the circle, so mak-

ing room for a fresh case. He then enters the name of his patient in the register, with the name of the disease, the prescriptions, &c.; and furnishes the patient with the receipts for the various medicines he orders, previously bringing them to the professor who, on finding them correct, or animadverting upon them when necessary, signs them for the apothecary. If the case be surgical, and requires dressing, or some minor operation, this is immediately done, sometimes by the professor, and often by the pupil under his eye. At all future visits, the same student continues to take charge of the same patient, and thus watches over all the phases of the disorder for better or for worse.

In addition to these two principal clinics, Internal and External, a third must be added, which has very properly received the name of *House clinic*. It owes its origin to the fact, that most of the ophthalmic professors in Vienna are in the habit of having, in their own dwellings, a set hour for the reception of patients among the middle and humbler classes of society, to which their private pupils always have free access, and to which strangers are usually invited. Many of the less severe diseases of the eye may here be observed; the professor's treatment is fully exemplified, and many hints, and much familiar advice is supplied.

One other mode of instruction which prevails at the Vienna school, though not strictly belonging to the category, must not be passed over, known by the name of *Privatissima*. The ophthalmic *privatissimum* consists of a short course of the operative surgery of the eye upon the dead subject, wherein the professor performs the different operations, and explains, as he goes along, every step and minute point in their performance, after which, he directs the pupil in the repetition of each of them. After attending one of these private courses, the pupil is allowed to operate upon the living subject. Each class of this most useful instruction is confined to about six pupils, and the most eminent professors of the art, such as Rosas, Jäger, and their assistants, are now in the habit of conducting them.

The practical results of this system of instruction are altogether such as a careful study and examination of it would naturally lead us to anticipate. Hence, respecting ophthalmology, it is a fact, that from this school there has emanated a host of men who have trodden in the footsteps, and many of whom in every way rival the high character of their respected masters, and who now, in their turn, and in other spheres, have become centres of attraction and information. Thus the benefit has been spread very generally over Germany. It is in this way, that we almost everywhere find names that are highly venerated in the science,—names such as Fischer at Prague, Walther, Schlagintweit, and Stromeyer at Munich, Chelius at Heidelberg, Von Ammon at Dresden, Ritterich at Leipsic, Jüngken at Berlin, and many others it would be te-

dious to enumerate. Hence the high and forward state of the science in that country, and the great number of expert and accomplished oculists. And passing from this to the other practical branches of the healing art, whenever this clinical system is brought into operation, there the best results are found to follow. It is useful not more to the taught than to the teacher ; and witnessing it with delight, in daily and active operation, at such places as Bonn, Heidelberg, Vienna, and Berlin, under the most experienced and sagacious professors, we could not repress the wish that it should be forthwith introduced wherever good and substantial education was desiderated for the credit of the profession, and the well-being of the community.

Having now endeavoured to furnish a slight sketch of the recent history, and present condition of ophthalmic science in Germany, and this in connection with its system of clinical instruction, we turn to Britain, and here, avoiding alike partiality on the one hand, and prejudice on the other, would make a corresponding survey.

The first observation which suggests itself is, that Britain was not without its share of those self-styled oculists who everywhere endeavoured to monopolize practice, and, till a late period, were a disgrace to the profession. Among these the most famous for several generations, we are informed, was a family of the name of Taylor, one of whom gives the following amusing account of himself. After curing all that were curable in his native country, he travelled to the continent, and there maintained a splendid equipage, his carriage being drawn by four horses gaily caparisoned, and attended by many out-riders ; the pannels of his carriage were painted all over with eyes, to denote his profession, and his assumed motto was “ *Qui visum dat, vitam dat.*”*

Britain, however, does not seem to be of all others the most congenial soil for charlatans ; or, at all events, we may congratulate ourselves, that, from an early period of English surgery, many authors set themselves to oppose and banish quackery, and become good oculists, while they were, at the same time, learned and able surgeons. Thus Richard Banister, who wrote an excellent work on the Diseases of the Eye towards the commencement of the seventeenth century, designates himself Master in Chirurgery, Oculist, and Practitioner in Physic ; and wishes his reader to understand, that his special breeding had been in the general skill of surgery. He tells us that, in the methodical practice and cure of blind people, by couching of cataracts, our English oculists had always a special care, according to the art, to couch within doors, out of the open air, to prevent further mischief ; while some of the mountebanks take their patients to the open market, and there, for vain-glory's sake, make them see, hurting the patients only to

* See Mr Middlemore's Treatise—Introduction.

cause the people wonder at their rare skill. In early English surgery, we have the respected names of Wiseman, Turner, and Cheselden, whose works testify that they were practically acquainted with ophthalmic maladies, and attended to them in common with other diseases. To the same highly respectable class belong the names of Pott, Hey, Ware, Saunders, and Wardrop; to which have succeeded, in the present day, many more who now enjoy a proud and well-merited celebrity.

It was not until the year 1805, that the Metropolitan institution, now designated the Royal London Ophthalmic Hospital, was founded for the especial treatment of eye diseases; and this, so far as we know, was the first establishment of the kind formed in the kingdom. The original intention was, that it should be a dispensary only; but the addition of an infirmary, in other words, of accommodation for in-door patients, was soon conjoined, and has been maintained to the present time. The late John Cunningham Saunders had the honour of being its founder; and his eminent success and valuable works give sure pledge that, had his life been prolonged, he would have proved one of the most successful improvers of the art. From the first he was assisted by the now venerable Dr Farre, who, for a long term of years, has done much for the advance of the science; and he was succeeded by Messrs Lawrence and Travers, two valued names, which are an honour to the profession. These gentlemen have been succeeded by the present officers of the establishment, who, especially Messrs Tyrrell and Dalrymple, by their writings as by their skill, have greatly distinguished themselves.

Much about the date of the founding of this hospital, another sprung up in the metropolis, which is now known as the Royal Westminster Ophthalmic Institution, and which Mr Guthrie superintends with so much credit to himself and benefit to the public. Nor, though later as to date, must we omit, as associated with the London school, the beautiful institution connected with the splendid establishment of Guy's, known under the name of Guy's Hospital Eye Infirmary, ably conducted by Mr Morgan, and in which we have a specimen of what may be done by private benevolence; and where, in fact, is all the machinery of what, if properly worked, might constitute an efficient ophthalmic clinic. To these we have still to add, the Cork Street Eye Dispensary, a private establishment, which the well-known, expert, and fashionable oculist Mr Alexander superintends, and to which, we believe, Mr Alexander Junior is assistant-surgeon; and the North London Eye Infirmary, which was founded in January 1842. Establishments of this sort were found so useful, that they soon began to spread from the capital into the provinces. Sir William, then Mr Adams, speedily founded one at Exeter, well known under the name of the West of England Eye Infirmary; and there now exist, in the southern parts of England,

one at Bath, instituted in 1811 ; one at Bristol, a dispensary, founded in 1812, and ably conducted by Mr Estling ; and a third at Plymouth. About twelve or fourteen years ago, an Eye Infirmary was established at Norwich, conducted by Dr Evans, and Mr Hull (now M. D.) ; and which is productive of great benefit to the public in the Eastern counties. In the great towns of the north, many flourishing institutions of this sort are to be found. Thus there is the Birmingham Eye Infirmary, where Mr Middlemore exercises his skilful benevolence, having six beds for in-patients, whilst more than 2000 appear annually as out-door patients. At Southam, in Warwickshire, there is an Eye and Ear Infirmary, which was established in 1818 ; and in York an Eye Institution, with the particulars of which we are not familiar. At Leeds there is an Eye dispensary, where Messrs Nunneley and Braithwaite officiate. At Manchester there is an excellent Eye hospital upon the same general plan, and having about the same extent of accommodation and number of patients as the Birmingham Infirmary. Here Messrs Hunt, Brown, and Walker have distinguished themselves. At Liverpool there are two institutions of this kind, and at Newcastle one ; and, to come to Scotland, there is an admirable Eye Infirmary at Glasgow, provided with twelve beds, and furnishing advice and medicine to about 1200 or 1300 out-patients annually, by the able hands of Dr Mackenzie and Professor Rainy ; whilst in Edinburgh we have two Ophthalmic institutions, the one, the Eye Dispensary, which owes its origin in the year 1824 to the energy and benevolence of Dr J. A. Robertson, and the other, a small infirmary, which Dr Watson had the merit of founding in 1834.

These are all the ophthalmic institutions in Britain of which we have procured intelligence ; and now, we turn with pleasure to the sister island, where the names of Hewson, Carmichael, Jacob, Wilde, and others are familiar to the ophthalmic student. In the Irish metropolis, Dr Jacob, several years ago, established the Pitt Street Eye Dispensary, which is now removed to the City-of-Dublin Hospital ; and Mr Wilde, two years ago, instituted the Frederick Lane Dispensary for Diseases of the Eye and Ear, which he has since efficiently maintained ; whilst two wards have long been appropriated to the treatment of eye cases in Stevens' Hospital. To these establishments, the eye first and naturally turns, for those facilities which are required for teaching that salutary art which they are engaged in administering ; whilst, at the same time, we are far from overlooking our larger and richly endowed general hospitals, which, failing the other class of establishments, receive the cases of eye diseases into their wards, where much skill and address are exercised in their treatment.

The question, then, here naturally suggests itself, do these excellent institutions, whether general or particular, supply those op-

opportunities which are desiderated for the efficient teaching and learning of ophthalmic science? or rather, are the opportunities which they afford any where made available to an extent that is in any degree satisfactory or sufficient?

It is impossible to cast a glance at any of these institutions without having it forced upon our conviction that they were primarily and especially intended "for the relief of the afflicted poor;" and that any thing which interferes with this benevolent purpose is not only an incumbrance but an injury. In their practical working in all our larger cities, if at all well conducted, the number of applicants is great; the time required for each is considerable, and must therefore be limited to what is absolutely required for the exigencies of the case. From 1000 to 2000 patients per annum constitutes the average number in our provincial establishments, and where the hospital is opened four days a-week, supplies from five to ten new cases daily, besides the many scores of old ones, which crowd regularly to receive the benefits of the charity. In a word,—with his steadiest exertion, and with all that quickness and tact which practice alone can give, it occupies a surgeon not less than one or two hours, and sometimes more, in the unceasing task of examining and prescribing, and ere his work is performed, with the strictest attention to point and promptitude, the time of the visit is elapsed, the convenience of the applicant is compromised, and his own powers are fatigued and exhausted. In the Royal London Ophthalmic Institution, where last year upwards of 6000 patients were admitted, and who have regular access to the institution four times a-week, the daily visitors, new and old, amount to many hundreds; and though two medical officers at a time afford their gratuitous and invaluable services, yet several hours necessarily elapse ere their weary task is fulfilled.

We mean not to affirm that no profit arises to the profession from this exercise of their benevolent skill in ophthalmic establishments and in great general hospitals. A benefit accrues to the assiduous medical officer, who is here presented with a large field of practice, which cannot be cultivated without a rich return; and the writings of Lawrence, Travers, Mackenzie, Guthrie, Tyrrell, Middlemore, Watson, and many others, abundantly prove that these gentlemen have worked for their own improvement, as well as for the benefit of the science. Nor do we deny that the devoted pupil also, who enters himself at one of these establishments, by patience and prompt seizure of passing opportunities, derives benefit. But this is only by the way; and his presence, interrogations, and manipulations, are generally out of place, and a source of annoyance to the patient.

It is, however, not less true, that though the relief of the poor patients be the primary object of these benevolent establishments, it need not be the only one; and existing where medical schools

and universities are established, there should be no difficulty in making arrangements of such a nature, that while one class of the applicants should receive all possible professional attention, another set, without suffering detriment in this point, should be made available for the scarcely less important ends of medical instruction. For this purpose, some plan corresponding to what has been above described as the External or Internal Clinic of Germany, should, as of necessity, be adopted ; the patients would require to be limited as to number ; so, likewise, would the students, who must needs be of a class which had made considerable progress, and were ripe for engaging in practice ; and finally, the practitioner would require time, and, being free from bustle and perplexity, should have opportunity to address himself, not merely to the relieving of the patient, but especially to the instruction of the pupil.

But leaving in our rapid survey the Eye hospitals of Britain and Ireland, let us turn to her Seminaries of medical education, and inquire what provision they make for ophthalmic instruction.

We have now many local and provincial schools scattered throughout the country—too many, we fear, for the purposes of substantial and extensive medical instruction ; and Birmingham and Manchester, according to our information, of all these schools, are the only ones where instruction upon Ophthalmology is afforded. Turn we now to our metropolitan cities and universities, inquiring, how stands the matter in them ? We learned lately in London, that there was no distinct course of lectures upon the subject given there at any of the schools, nor at either of its colleges ; nor was there any immediate prospect of such a course being provided. Dublin is decidedly more fortunate ; for there both Dr Jacob and Mr Wilde are in the habit of delivering courses of lectures on ophthalmology ; the former in the Baggot Street City-of-Dublin Hospital, and the latter in the School of Medicine and Surgery, Park Street ; whilst in Scotland, Dr Mackenzie has for many years been in the habit of giving a full and regular course within the walls of the college at Glasgow ; not, however, be it noted, as one of the professors of the university, but as Waltonian lecturer only : and in Edinburgh, the late Dr Hunter, whose promising talent excites the deeper regret for his early death, gave several regular courses on the subject of Eye diseases ; whilst my friend, Dr Robertson, has been in the habit of giving prominence to this branch in his lectures upon Surgery.

From all this, then, it would appear, that, with the partial exception of Glasgow, no chair for teaching ophthalmic science exists in any university within the British empire ; a sad blank, which can only be very partially supplied by the professors of Medicine and Surgery, however ably they may handle their respective and extensive branches ; and which we have reason to know is to an extent rather to whet than to satisfy the appetite. In filling up this slight sketch of the state of ophthalmic instruction in Britain, we

need scarcely add, that the government of the country, or rather the Crown, has done nothing to supply, what we now venture to characterize as a very great and decided deficiency.

We have still to insist for a little upon Clinical lecturing; a practice which, as before observed, was pursued by Boerhaave at Leyden, and was introduced by his pupils into the schools of Vienna and Edinburgh; and we shall now venture to revive the recollection of its history in this great seminary, mainly in the strong and masculine language of the late Dr Gregory. "Dr John Rutherford, the original professor of the practice of physic in this university, had the merit of beginning the medical clinical lectures, and had them all to himself for seven or eight years; but as soon as he found that some of his colleagues chose to undertake them, he withdrew from them. For some years afterwards, Dr Monro *primus*, Dr Whytt, and Dr Cullen, had the clinical lectures among them. From 1766 to 1773, all the time that my father was professor in this university, he and Dr Cullen had the winter clinical lectures between them; during which time, not more than one or two summer courses were given, and these by Dr Francis Home only. Soon after my father's death, Dr Cullen's family prevailed on him to withdraw from the clinical lectures, perceiving that this labour, in addition to his other, was too much for him. Drs Plummer, Alston, Monro *secundus*, Black, and John Hope, would never take any share of the clinical lectures. When I was appointed professor of physic in 1776, not one of the senior professors, Monro, Cullen, Hope, Black, would take any share of them; of course they fell to the share of the two junior professors, Dr F. Home and myself, and we had them entirely between us two for fourteen years. I had the merit of prevailing with Dr Daniel Rutherford to take share of these lectures, though I found it no easy matter to accomplish; nor do I believe I should have succeeded, and I certainly should not have continued to take share of them myself, if the labour had not been made lighter, or at least less frequent in its return, by our junior colleagues, Drs Duncan, Hope, and Home sharing it with us. Though I have bestowed much good advice upon him for this purpose, I have not yet prevailed on Dr Monro *tertius*, to take any share in these lectures. The plain truth is, that they are so severe a labour, both in point of attention and time, that all of us feel them very irksome, even though our time of attendance is but three months; and as clinical lectures cannot be prepared before hand, as those on every other branch of physic may be, and ought to be, the incessant drudgery of preparing them from day to day, and the consequent interruption of all other study, and much other business, is often very inconvenient, and sometimes quite intolerable."

In addition to this statement of Dr Gregory, it must be mentioned, that he himself ceased to deliver clinical lectures for many years before his death, and that they were then maintained by

four of the members of the Medical Faculty in rotation ; and that during the whole of this long period, extending to well nigh a century, this right to deliver clinical lectures in the university was not dependent, to use the words of Dr Thomson, “ upon any direct appointment given by the Crown, or by the patrons of the university, or by any rules or regulations embodied by the patrons in the commissions of the professors which they nominated, but on a private arrangement between the *Senatus Academicus*, and the managers of the Royal Infirmary, in consequence of which, each member of the faculty was entitled in his turn to take the medical charge of certain wards in the hospital, and to deliver lectures on the cases of the patients which they contained.”* To this we have only to add that, in the year 1803, the Crown appointed the late Mr James Russell to the *Regius Professorship of Clinical Surgery*, a chair which is now ably filled by Professor Syme ; and in the year 1829 the managers of the infirmary, in the exercise of their own powers, authorized the senior physician and senior surgeon in attendance, and whether members of the medical faculty or not, to deliver clinical lectures ; which, though not recognized by the *Senatus Academicus*, are so by the Royal College of Surgeons of Edinburgh, and by most of the other medical boards.

Such, then, is the history and constitution of the clinical lectureships established in this school ; and as to the nature and extent of the instruction afforded to the pupils, we need scarcely say any thing, as most of those we now address have had personal experience of its working. One or more wards are assigned to the clinical teacher, into which he admits such patients as best suits his purpose ; these are visited by him and his pupils once a-day at the regular hours of visit ; their cases are carefully drawn up by his clerks, and the pupils are permitted to copy them into their own case-books. The successive daily reports may be added at each visit, as they are dictated at the bed-side of the patient by the professor or teacher. To see and hear the professor examine and prescribe is all that the pupil, generally speaking, has to do with them, though he may frequent the wards during the intervals of the visits. Two clinical lectures are given each week, when the teacher explains the nature of the cases, and the rationale of the treatment, with such other remarks as appear to him best calculated to illustrate the disease. That this has been, and is still useful in its way, we mean not to deny ; for what system, worked by such men as *Monro*, *Cullen*, and *Gregory*, could fail to be beneficial, and to command celebrity ? But, notwithstanding, we contend that in many respects it is defective ; its style is still essentially didactic ; all its value emanates from the teacher, and may never reach the perception, nor excite either the attention or the energies of the pupil ; in these respects it differs wholly from the clinics of

* Additional Hints respecting the improvement of Medical Instruction in Edinburgh University, 1826.

Germany, which, though they may have originally sprung from the same source, have eventually taken a different direction, and assumed an essentially different character.

This conclusion appears so clear and undoubted, that now, in again adverting to the great matter in hand, viz. the best mode of teaching the practice of the healing art, and of conveying instruction in the ophthalmic, as well as other practical branches, we consider any laboured or formal comparison of the two systems and schools as in actual operation, in their respective localities, as altogether superfluous. *1st*, In Britain, the system has received no royal, no government patronage; *2d*, It has received no university protection in the schools generally, not excluding Edinburgh; *3d*, There is no professor of Systematic ophthalmology; *4th*, There is none of Practical ophthalmology; and attendance upon such courses is necessarily nowhere made imperative; *5th*, As a recognized part of the school, there is nowhere an Ophthalmic hospital, nor ophthalmic wards; *6th*, There is no Internal clinic; *7th*, No External; and *lastly*, no *Privatissimum*; and hence, those pupils would, indeed, greatly deceive themselves,—as would their friends and advisers,—or would be endowed with powers altogether extraordinary, who, destitute of those rare advantages which attract professional men from every part of the world to Germany, would for a moment suppose that they are as well without them, and are placed in circumstances as favourable as they could desire. Edinburgh has had its clinic, and has greatly profited by it. But is that clinic perfect? Is it unsusceptible of improvement? We believe not; as contrasted with Germany, it is, in various particulars, woefully behind; nay, it is wholly deficient. She has altered and improved in other matters; we would urge her, as she values the stability of her high character,—and the same advice we would extend to other medical seminaries,—to improve in this important particular. If one does not, another will, and will reap the benefit. To feel the full importance of the mode of instruction we advocate, it may require, perhaps, to be seen as well as described; but it should not be difficult to picture to one's-self a man properly qualified and selected; such a man as a *Cheilius*, a *Jäger*, a *Dieffenbach*, and many more, thus receiving at once his patient and his pupil,—to observe his whole carriage towards both, bland and yet business-like, kind and judicious; to notice the promptitude,—the kind of instinctive glance with which he recognizes the character of the malady,—with which he certifies himself of its real nature, the address with which he uses the appliances of his art, marks their effects, watches the result, and, with the case actually before them, initiates his eleve into all his skill, from day to day, from month to month. We fain hope that no one inclines to regard us as too urgent or importunate in this matter. In case they do, however, we corroborate our convictions with the sentiments of other and wiser men. “Clinical

of instruction in the whole medical curriculum, as far as regards the pupil, and the most difficult as it respects the professor."* "In France," says Dr D. Johnston, "and perhaps even more in Italy and Germany, clinical instruction forms the most important part of general medical education."† And once more, Dr J. Thomson, who has given much of his attention to the whole subject, declares that "clinical teaching is the most important and difficult duty in which a teacher of medicine can be employed."‡

Since these pages were penned, we have come to the knowledge of various movements for the promotion of the objects here recommended, which, far from damping our feeble efforts, would only excite us the more, until the beneficial object shall be accomplished. We have been recently informed, that, of the recommendations which were embodied in the report presented by his late Majesty's Commission for visiting the Universities and Colleges of Scotland, one was, that there should be appointed a Professor of Clinical Medicine, whose office and duties should be permanent,—an appointment which could scarcely fail to advance the plan here recommended. We have also learned, that, a few years ago, one of the Patrons of the Edinburgh University, laid on the table of that honourable board, a motion to the effect, that the patrons should institute a chair for the purpose above stated; which motion, however, was not prosecuted at the time. Again, although no hospitals nor lectures for instruction in Ophthalmic science are anywhere provided by the universities and great medical schools, and consequently cannot be enjoined upon any, yet, in the printed Regulations of the Army Medical board, we read, "that it will be considered an additional recommendation to the candidate to have attended an establishment for the treatment of diseases of the eye;" while in the corresponding official document of the Navy Board, it is declared "that a preference will be given to those candidates for the service who, by possessing a knowledge of the Diseases of the Eye, appear to be more peculiarly eligible for admission to the service." That a corresponding feeling, induced by these regulations, and by like honourable motives, widely pervades the class of students is manifest from the complaints which we have frequently heard expressed, that no adequate provision has been made for teaching this department; and is still more demonstrated by the fact, that, in the year 1833, a petition was prepared and numerous signed by the medical students and graduates of the University of Glasgow, and by them presented to the Honourable the Senatus Academicus of that institution, in which, among other important suggestions, they petition, "that, with a view to fill up what they consider desiderata in the medical curriculum, they respectfully entreat the honourable and learned Senatus to render imperative upon future graduates a course of classes in addition to those specified in the late

* Observations on the system of Teaching Clinical Medicine in the University of Edinburgh, 1827.

† History of the present Condition of Public Charity in France, 1829.

public regulations, amounting to six, and one of which was upon the Diseases of the Eye."

Gentlemen, having lately, with the highest satisfaction, had an opportunity of witnessing the operation of the admirable system of instruction upon which we are now dwelling, and having, moreover, we hope, somewhat profited by it, we trust we may stand excused, if we feel solicitous that the knowledge of it, and the benefits accruing from it, may be spread as far and wide, and as rapidly as they are found really to deserve. We forget not how little it is that can be accomplished by the individual who now addresses you; but that little he would not leave undone. He can avail himself of such an opportunity as that you have now so kindly conceded; and can request you to give your attentive consideration to the subject. Had he the honour of gaining for a moment the ear or attention of any of the more leading and influential members of the profession,—any of those who so laudably exert themselves in the great subject of medical education and qualifications,—he would particularly solicit their attention to the matter. Did they at all see it in the light in which it has been regarded by many most competent judges, then, in their intercourse with our statesmen and legislators, they could scarcely fail to suggest afresh, because it is not for the first time, that there is a form and method in which, at a very small pecuniary outlay, and by judicious patronage, they could not fail to act, without conferring a great boon upon their country, and an honour upon themselves. In their intercourse, moreover, with the Honourable Patrons and Governors, or Directors of our Universities, they might suggest to them that here was a mode, it might be wholly free from expense, in which they could greatly advance the prosperity of the seminaries under their charge; and once more, there is another class, consisting of our Senatuses and Professors, and still more, our Managers of hospitals, who, by them, might effectually be urged to recognize the pressing and vital importance of these simple means of genuine clinical instruction, in carrying forward the great and benevolent objects they are associated to promote.

In my own most limited sphere, again, having assumed the highly honourable and responsible duties of a teacher, I would anxiously endeavour to afford something like a specimen of what is here so earnestly recommended; and I feel grateful that arrangements have been made which afford great facilities for the execution of the plan.

* * * *

In conclusion, Gentlemen, notwithstanding our high estimate of the value of the plan we have attempted so imperfectly to sketch, and of the importance of its introduction into this country and school, it is not without many anxious feelings that we adventure upon the somewhat novel, most difficult, and important course. We do indeed entertain a very deep and most sincere conviction of our own incapacity to do full justice to the subject.

plan fail, we are convinced this will result, not from the badness of the cause, nor from any defect in the importance and excellency of the scheme, but solely from the incompetency of him who undertakes it. Should it unfortunately be our lot to be disappointed in our hopes, we believe it will be in a good cause ; and though success may not attend our labours, we doubt not that, under brighter auspices, and in abler hands, the object will one day be accomplished, it may be here, it may be elsewhere, to the joy and gratitude of many a thankful recipient of its benefits.

Postscript.—Since these pages were printed the following important particulars have been kindly brought under our notice. In the introduction to Dr Graves' valuable *System of Clinical Medicine*, published in 1843, a short account is given of the German system of clinical instruction, to which we beg attention ; and we are informed that Dr Graves introduced the system into the Meath Hospital, in Dublin, as far back as the year 1821. We must, however, request that the Doctor shall be himself heard. "Eleven years experience enables me strongly to recommend the method of instruction pursued in Germany. Since my appointment to the Meath Hospital, I have had extensive opportunities of observing its good effects. No session has elapsed without furnishing proofs in its favour." And again, in a postscript, dated 1842, he remarks, "twenty-one years have elapsed since the preceding lecture was delivered in the Old Meath Hospital, and my subsequent experience has amply verified the opinion I therein expressed." (P. 10, 11.) Again, we have recently received a letter from a kind correspondent in London, who writes, It is intended, at the *

* to give a full course of ophthalmology this spring, (1843.) Anatomy, physiology, optics, as applied to vision, general and particular pathology, and the surgery of the organ, will be the subjects treated by the various officers. We shall adopt the plan of the external clinic, with the exception of not permitting (at present) the pupils to take charge of the patients. We think this would be attended with great difficulty here, where we cannot compel the necessary attendance and punctuality of pupils, or out-patients.—And once more, Mr Wilde has done us the favour to state that during his course of lectures in Park-Street School, during the current spring, he purposes giving practical instruction in it after the Vienna method. All this, together with the interesting coincidence that Dr Bennett has, this session, commenced a course, after the fashion of the German clinic, in connection with the Edinburgh Royal Dispensary, bids fair, we trust, for the speedy introduction of that mode of teaching which is considered by so many as the most useful and the best. *

* See additional information in a highly interesting Biography of Dr Graves in the *Dublin University Magazine* for Feb. 1842, p. 260.